ASSIGNMENT 2

Textbook Assignment: "Bathythermograph Observations," "Aviation Weather Codes," "Surf Observations," and "Plotting Radiological Fallout and Chemical Contamination Coverage," chapters 2 through 5, pages 2-13 through 5-16.

2-1. Which of the following points on a BT trace is NOT considered for analysis and reporting?

1. The surface
2. The mixed layer depth
3. The top of an isothermal layer
4. The mid-point of the thermocline

2-2. What is normally the maximum number of points that may be selected for a BT observation?

1. 15
2. 20
3. 25
4. 50

2-3. Which of the following activities should report surface wind direction and speed in bathythermograph observations?

1. Ships
2. Submarines
3. Aircraft
4. Coast Guard units only

JJYY 06087 0605/ 14324 15739 32807
40222 88888 00102 00211 10205 24145
99901 10120 50109 99903 40543 NSHP

Figure 2-A

WHEN ANSWERING QUESTIONS 2-4 THROUGH 2-6, REFER TO FIGURE 2-A.

2-4. What is the UTC observation date in the BATHY observation?

1. May 6th
2. June 5th
3. June 8th
4. August 6th

2-5. Which of the following groups is reporting recorder type and probe information?

1. 00102
2. 32807
3. 40222
4. 88888

2-6. What water depth and temperature is being reported by the groups 99901 10120?

1. 11 meters 1.2°C
2. 100 meters 12.0°C
3. 110 meters 12.0C
4. 1,101 meters -2.0°C

2-7. What code group is used to indicate a bottom depth and temperature reading?

1. 00000
2. 66666
3. 88888
4. 99999

2-8. If the last three groups of a BATI-IY report appear as "66666 10427 31009," what does the 10427 group indicate?

1. Surface current with set at 040°T and drift of 2.7 knots
2. Surface current with set at 270°T and drift of 4.0 knots
3. Actual water depth of 427 meters
4. Charted water depth of 427 meters

2-9. Where should unclassified bathythermograph observation log sheets be mailed to at the end of each month?

1. Naval Oceanographic Office, MS
2. National Oceanographic Data Center, Silver Spring, MD
3. Fleet Numerical Meteorology and Oceanography Center, CA
4. Commander, Naval Meteorology and Oceanography Command, MS

ZZYY 93789 10017 11014 101234
00234511119 01207 10123 29056 30132
4013352003 22219 00147 10202 33311
8887120010 30147 43505 20050 30131
4342520100 30117 43412 20150 30093
4341066091 20050 13090 20150 15100
444201// 10017 1000/ 71227 81101
90150

Figure 2-B

IN ANSWERING QUESTIONS 2-10 THROUGH 2-14, REFER TO FIGURE 2-B, A DRIFTING BUOY REPORT.

2-10. What is the observation date/time?

1. 10 Jan 1997 at 1014Z
2. 10 Jan 1997 at 1101Z
3. 1 Oct 1997 at 1014Z
4. 1 Oct 1997 at 1101Z

2-11. What is the buoy's reported position?

1. 12°34'N 23°45'E
2. 23°45'N 12°34'E
3. 1.234°N 2.345°E
4. 12.34°N 23.45°E

2-12. What is the reported (a) air temperature, and (b) sea-surface temperature?

1. (a) 12.3°C (b) 14.7°C
2. (a) 12.3°C (b) 20.2°C
3. (a) 12.7°C (b) 14.7°C
4. (a) 12.7°C (b) 20.2°C

2-13. What is the reported water temperature at 150 meters?

1. +0.93°C
2. -0.93°C
3. +9.30°C
4. -9.30°C

2-14. What is the set of the water current at 150 meters?

1. From 360°
2. Toward 360°
3. From 150°
4. Toward 150°

2-15. Routine TAFs are transmitted at what time intervals?

1. 00Z and 12Z only
2. 03Z and 15Z only
3. 03Z, 09Z, 15Z, 21Z
4. 00Z, 06Z, 12Z, 18Z

2-16. The contraction WSCONDS is used in the TAF code to indicate which of the following conditions?

1. Severe weather in the vicinity
2. Lightning
3. Wet runway conditions
4. Low-level wind shear

2-17. In the TAF code, what is indicated by the group "530305"?

1. Occasional, moderate turbulence in clear air between 3,000 and 5,000 feet
2. Frequent, moderate turbulence in clear air between 3,000 and 8,000 feet
3. Light icing, in precipitation between 3,000 and 8,000 feet
4. Severe icing, in cloud between 3,000 and 5,000 feet

2-18. Which of the following contractions should be used in the TAF code to indicate temporary fluctuations in the weather lasting less than 1 hour?

1. FM
2. BECMG
3. TEMPO
4. AMD

2-19. A TAF amendment would be required when a forecasted ceiling of 3,500 feet drops to 2,800 feet?

1. True
2. False

2-20. In the PIREP code, what is the text element indicator "/TP" used to report?

1. Time of report
2. Type of aircraft
3. Outside air temperature
4. Turbulence

2-21. When encoded in a PIREP, which of the following meteorological elements must always be spelled out?

1. Lightning
2. Extreme turbulence
3. Low-level wind shear
4. Tornado

2-22. A PIREP beginning with the contraction "UUA" is used to report which of the following occurrences?

1. Tornadoes and waterspouts only
2. Severe icing only
3. Severe or extreme turbulence only
4. Any hazardous weather

2-23. Which of the following publications contains comprehensive information on surf observation procedures?

1. NAVMETOCCOMINST 3140.1
2. FMH-4
3. NTP-3
4. NWP 3-59.3

2-24. Which two factors create surf?

1. Ocean currents and sea waves
2. Offshore winds and sea waves
3. Topography and swell waves
4. Onshore winds and swell waves

2-25. If the deep-water wave length is averaging 50 feet, how deep is the water in the surf zone where the waves begin to break?

1. 10 feet
2. 25 feet
3. 50 feet
4. 100 feet

2-26. Which of the following actions occur when a deep-water wave “feels bottom”?

1. Wave speed and length decrease; wave height decreases
2. Wave speed and length decrease; wave height increases
3. Wave speed and length increase; wave height decreases
4. Wave speed and length increase; wave height increases

2-27. Which of the following hydrographic features is the most important factor in determining breaker type?

1. Tides
2. Shoreline configuration
3. Beach slope
4. Nearshore currents

2-28. Which of the following factors that affect surf height may change in a relatively short period of time?

1. Beach slope
2. Beach face
3. Deep-water sea wave height
4. Offshore bottom hydrography

2-29. Refraction is the bending of waves toward areas of slower wave speed?

1. True
2. False

2-30. What information is included in SUROB element ALFA?

1. To the nearest foot, average height of 100 consecutive observed breakers
2. To the nearest foot, average height of only the highest one-third of 100 observed breakers
3. To the nearest half-foot, average height of 100 consecutive observed breakers
4. To the nearest half-foot, average height of only the highest one-third of 100 observed breakers

2-31. Spilling breakers generally occur on beaches with what type of slope?

1. Gentle
2. Moderate
3. Steep
4. Extreme

2-32. What type of breaker is characterized by violent tumbling action and a loud explosive sound?

1. Spilling
2. Plunging
3. Surging
4. Curling

2-33. You are standing on the beach looking seaward. Breakers are approaching the beach from your right, moving toward your left, making a 30-degree angle to the beach. How should the breaker angle be identified?

1. 30° left flank
2. 30° right flank
3. 60° left flank
4. 60° right flank

2-34. An empty soda can is seen floating parallel to shore. If the can moves 67 feet during 1 minute, what is the approximate littoral current speed?

1. 6.700 kt
2. 1.100 kt
3. 0.670 kt
4. 0.067 kt

2-35. In element HOTEL of the SUROB, how should wind direction be reported?

1. True bearings only
2. Relative bearing to the beach
3. Relative bearing to the task group
4. Magnetic bearings only

2-36. What is the purpose of the Modified Surf Index?

1. Used as a "go/no go" decision aid for amphibious landings
2. Used as a modification tool for surf forecasts
3. Used to adjust the significant breaker height prior to reporting
4. Used to calculate secondary significant breaker height

2-37. How often are SUROBs completed and forwarded to the task force commander?

1. Once every 6 hours
2. Once every 12 hours
3. Minimum reporting interval as directed, and whenever conditions change significantly
4. Every half-hour

2-38. How is the SUROB Brevity code transmitted?

1. Satellite
2. AUTODIN
3. Voice or flashing light
4. Facsimile chart

2-39. When do maximum rip current velocities usually occur?

1. During a falling tide
2. During a rising tide
3. During summer
4. During winter

2-40. How many low-tide periods occur with a diurnal tide?

1. One
2. Two
3. Three
4. Four

2-41. A NAV NBC 3 NUC message contains what type of information?

1. Initial report of NBC weapons use
2. NBC survey results from naval forces
3. Shipboard MOPP level status
4. Effective downwind message for naval forces

2-42. A nuclear effective downwind message (EDM) provides fallout information after a nuclear device has been detonated.

1. True
2. False

IN ANSWERING QUESTION 2-43, REFER TO FIGURE 5-2 IN YOUR TRAMAN.

2-43. What is the (a) downwind direction and (b) expansion angle for a 90 kiloton blast near 30N 120W?

1. (a) 015 (b) 145
2. (a) 145 (b) 015
3. (a) 150 (b) 050
4. (a) 155 (b) 060

2-44. Which of the following TESS programs calculates fallout information?

1. SLAP
2. EDORD
3. RADFO
4. CHAFF

2-45. Which of the following types of nuclear bursts produces the most fallout?

1. High-air burst
2. Low-air burst
3. Surface burst
4. Underwater burst

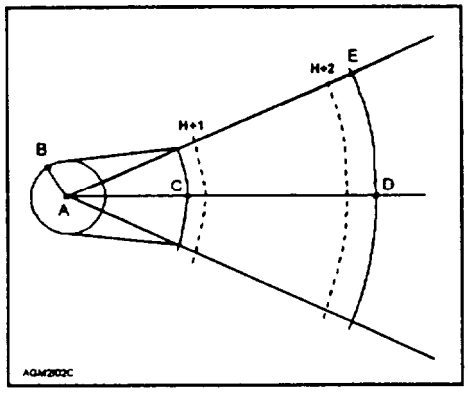

Figure 2-C

IN ANSWERING QUESTIONS 2-46 THROUGH 2-48, REFER TO FIGURE 2-C. THIS IS A REPRESENTATION OF A RADIOLOGICAL FALLOUT PLOT WITH POINT "A" AT GROUND ZERO.

2-46. When you use the TESS RADFO output and the effective downwind forecast (EDF), what value is used to determine the orientation of line AD?

1. Direction of the blast from the observer
2. Effective downwind direction
3. Expansion angle
4. Cloud top angle

2-47. When you use an effective downwind forecast (EDF) at sea, what value is used as radius AB to draw the circle around GZ?

1. The cloud radius provided in the Effective Downwind Forecast (EDF) message
2. The cloud radius obtained from the yield group on the Ship's Fallout Template
3. It is one-half of the downwind distance
4. It is one-third of the downwind distance

2-48. What is represented by the distance between points A and C?

1. It represents the Zone I hazard area
2. It represents the Zone II hazard area
3. It represents the cloud radius
4. It represents the safety distance

IN ANSWERING QUESTION 2-49, REFER TO FIGURE 5-8 IN YOUR TRAMAN.

2-49. What is the safety distance for a 150 kiloton weapon?

1. 5.0 nmi
2. 6.1 nmi
3. 7.0 nmi
4. 4.0 nmi

2-50. When a chemical agent is released under very light or calm wind conditions, the attack area and the hazard area will both be circular. At sea, what is the minimum radius of the attack area?

1. 1/2 nautical mile
2. 1/2 kilometer
3. 1 nautical mile
4. 2 kilometer

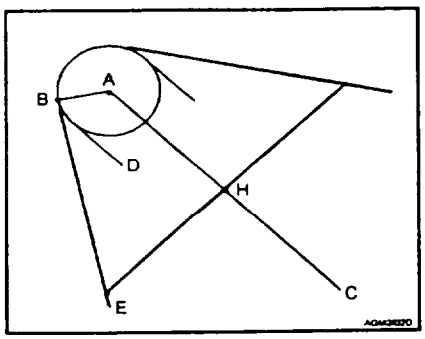

Figure 2-D

IN ANSWERING QUESTIONS 2-5 1 AND 2-52, REFER TO FIGURE 2-D. THIS FIGURE IS A REPRESENTATION OF A TRIANGULAR CHEMICAL HAZARD AREA.

2-51. In the diagram, line AHC represents the Chemical Downwind Direction (CDD). What meteorological parameter is used to determine this direction?

1. Mean layer wind, surface to 1,000 feet AGL
2. Surface wind direction
3. Surface wind direction plus 180°
4. Mean layer wind, surface to 1,000 feet AGL plus 90°

2-52. At sea, if the wind speed is 15 knots, what radial angle, represented by angle DBE in the diagram, is used?

1. 20°
2. 30°
3. 35°
4. 40°

2-53. Which of the following wind changes are considered significant relative to a chemical attack?

1. Wind speed increases from 11 knots to 15 knots
2. Wind speed decreases from 8 knots to 4 knots
3. Wind direction veers from 180° to 200°
4. Wind direction backs from 010° to 355°

2-54. In a NAV NBC 3 CHEM message, which elements provide the attack position, chemical downwind direction and speed, and the downwind hazard distance?

1. A, D, and F
2. PA, Y
3. PB and ZA
4. F, Y, and ZB

2-55. When a chemical attack is plotted as two connected triangular areas, by what means was the chemical agent delivered?

1. Mortar
2. Missile
3. Stationary fog generator
4. Aircraft spray